

DETAILED ACTION

1. Status of the instant application:

Claims 5, 13, 15, and 18 are cancelled in the instant application.

Claims 1, 4, 9, and 14 are currently amended in the instant application. The examiner notes that claim 14 is recited as previously presented, this is a mere typographical error and is meant to be currently amended.

Claims 2-3, 6-7, 11-12, 17, and 19-20 are previously presented.

Claims 8, 10, and 16 are original in the instant application.

Claims 21-35 are newly added.

Claims 1-4, 6-12, 14, 16-17, and 19-35 are pending in the instant application.

Response to Arguments

2. Applicants amendments and remarks and arguments filed 10/15/2009 have been fully considered and are found to be persuasive, please see the office action below for details.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4. Authorization for this examiner's amendment was given in a telephone interview with Andrew Cameron Reg. # 50281 on 12/11/2009.

5. The application has been amended as follows:

In the claims

6. Insert where underlined and delete where ~~strike through~~.

7. Claim 21.

A method for sharing resources across a plurality of computing platforms, the method comprising: receiving a request for a first server blade to access a shared resource hosted by a second server blade; using first firmware located at the first server blade, determining the second server blade via which the shared resource may be accessed, wherein the first firmware implements an Extensible Firmware Interface (EFI) framework; asserting a first System Management Interrupt (SMI) at a first processor included in the first server blade; switching an execution mode of the first processor included in the first server blade to a System Management Mode (SMM) in response to the first SMI; entering a the System Management Mode (SMM) at the first server blade and the second server blade; in response to entering the SMM, initiating an out-of-band (OOB) communications channel between the first server blade and the second server blade; wherein initiating the OOB communications channel includes asserting a second SMI on a second processor included in the second server blade; switching an

execution mode of the second processor to the SMM in response to the second SMI; entering a the System Management Mode (SMM) at the second server blade; sending the request to the second server blade from the first server blade over the OOB communications channel; and using second firmware located at the second server blade, accessing the shared resource, wherein the second firmware implements the EFI framework.

8. Claim 30.

A method for sharing a plurality of storage devices across a plurality of computing platforms, the method comprising:
configuring the plurality of storage devices as a virtual storage volume;
maintaining a global resource map that maps input/output (I/O) blocks defined for the virtual storage volume to corresponding storage devices that actually host the I/O blocks; receiving a data access request identifying an I/O block from which data are to be accessed via the virtual storage volume wherein the request is for a first server blade to access the data; using first firmware located at the first server blade, identifying a second server blade via which a target storage device that actually hosts the I/O block may be accessed through use of the global resource map, wherein the first firmware implements an Extensible Firmware Interface (EFI) framework; asserting a first System Management Interrupt (SMI) at a first processor included in the first server blade; switching an execution mode of the first processor included in the first server blade to a System Management Mode (SMM) in response to the first SMI; entering a the System

Management Mode (SMM) at the first server blade ~~and the second server blade~~; in response to entering the SMM, initiating an out-of-band (OOB) communications channel between the first server blade and the second server blade; wherein initiating the OOB communications channel includes asserting a second SMI on a second processor included in the second server blade; switching an execution mode of the second processor to the SMM in response to the second SMI; entering a the System Management Mode (SMM) at the second server blade; routing the data access request to the second server blade that is identified, the data access request being routed from the first server blade to the second server blade over the OOB communications channel; and using second firmware located at the second server blade, accessing the I/O block on the target storage device, wherein the second firmware implements the EFI framework.

9. Claim 33.

A blade server system, comprising:

a chassis, including a plurality of slots in which respective server blades may be inserted; an interface plane having a plurality of connectors for mating with respective connectors on inserted server blades and providing communication paths between the plurality of connectors to facilitate in out of band (OOB) communication channel; and a plurality of server blades, each including a processor and firmware executable thereon to perform operations including: receive a resource access request from an operating system running on a requesting server blade to access a shared resource hosted by at

least a second server blade selected from among the plurality of server blades; using first firmware located at the first server blade, determining a target resource host from among the plurality of server blades that hosts a target resource that may service the resource access request, wherein the first firmware implements an Extensible Firmware Interface (EFI) framework; asserting a first System Management Interrupt (SMI) at a first processor included in the first server blade; switching an execution mode of the first processor included in the first server blade to a System Management Mode (SMM) in response to the first SMI; entering a the System Management Mode (SMM) at the first server blade ~~and the second server blade~~; in response to entering the SMM, initiating an out-of-band (OOB) communications channel between the first server blade and the second server blade; wherein initiating the OOB communications channel includes asserting a second SMI on a second processor included in the second server blade; switching an execution mode of the second processor to the SMM in response to the second SMI; entering a the System Management Mode (SMM) at the second server blade; sending the resource access request to the target resource host, the resource access request being sent from the first server blade to the second server blade over the OOB communications channel; and using second firmware located at the second server blade, accessing the target resource via the target resource host to service the resource access request, wherein the second firmware implements the EFI framework

Allowable Subject Matter

10. Claims 1-4, 6-12, 14, 16-17, and 19-35 are allowed.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HO SHIU whose telephone number is (571)270-3810. The examiner can normally be reached on Mon-Thur (8:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HTS
12/14/2009
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Examiner, Art Unit 2457

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